

The Examiner objected to the amendment filed March 20, 2000 with respect to claims 33 and 34 on the grounds that it introduces new matter into the disclosure and accordingly rejected claims 33-34 and 40-42 as containing new matter. Applicants respectfully disagree. In support of the Examiner's position, the Examiner states that the specification only supports that the second and fourth layers are composed of and selected from the "same" group of materials. This is not true. In fact, the specification and claims as filed specifically disclose that such layers can be different. For example, in column 6, lines 50-59, the group of metal oxide layers is identified and states that:

"... it is preferable that the thicker layer, second layer 22, be from this group. .
It is more preferable, however, that both the second layer 22 and the fourth layer 26 be from this group of metal oxides."

Thus, the specification clearly contemplates that the second and fourth layers (layers 22 and 26) could be from different groups and in fact could be different from one another. See for example, Table 4 and the specification in column 8, lines 38-46. See also independent claim 1 which only requires "at least one" of the layers be selected from the identified group. Accordingly, it is submitted that the amendments to claims 33 and 40 do not constitute new matter and reconsideration is respectfully requested.

The Examiner has also rejected claims 9, 10, 19-22, 31-32, 33, 34, 35, 36, 37, 39, 43, 47 and 50-53 as being based upon a defective reissue declaration. Applicants respectfully disagree for two reasons. First, the declaration of applicants has been mischaracterized in the Office Action of May 25, 2000 and second, pursuant to the new reissue rules, the declaration need only identify a single error in the initial reissue declaration. Thereafter, if any additional errors are corrected, all that is required is a supplemental declaration indicating that the errors were made "without deceptive intent".

Contrary to the Examiner's position, the declaration as filed with the reissue application stated that independent claim 1 (and dependent claims 2-7) recite a coated article comprising at least one layer of "a DC reactively sputtered material ...", independent claim 8 recites a process comprising a step of "DC reactively sputtering a material ..." and independent claims 9 and 10 recite a coating comprising two layers "substantially composed of DC reactively sputtered tin oxide ...". The declaration goes on to state that as to the coating of claims 9 and 10, applicants believe they are novel and non-obvious "without reference to the DC reactively sputtering limitation". With respect to claims 1-8, the declaration states that such claims delete the term "DC reactively" which modifies the sputtered material. Thus, the reissue declaration as filed clearly contemplates the deletion of not only "DC" from claims 1-8 but also the limitation "DC reactively" from such claims. Further, the reissue declaration as filed specifically contemplated deletion of the "DC reactively sputtered" limitation from claims 9 and 10. Thus, the amendments to the claims are proper and well within the reissue rules.

The current reissue rules also provide that for any error corrected which was not covered by the original reissue declaration, a supplemental declaration must be submitted stating that such errors arose without any deceptive intention before allowance. Accordingly, a supplemental declaration is being submitted herewith by the inventors, Erik Bjornard and Bill Meredith.

Applicants also disagree with the Examiner's conclusions that certain claims are directed to "entirely distinct inventions" from the original patent. Notwithstanding the citation of *In re Wyler*, it is submitted that such claims are proper and are fully supported by the disclosure in accordance with 35 U.S.C. §112, first paragraph. See, for example, §1412.01 directed to reissue claims wherein it

states that claims presented in a reissue application are considered to satisfy the requirement of 35

U.S.C. §251 where:

“(A) The claims presented in the reissue application are described in the original patent specification and enabled by the original patent specification such that 35 U.S.C. 112 first paragraph is satisfied; and

(B) Nothing in the original patent specification indicates an intent not to claim the subject matter of the claims presented in the reissue application. Reconsideration is respectfully requested.”

Accordingly, for the reasons set forth above, it is submitted that claims 9, 10, 19-22, 31-37, 39, 40-43, 47 and 50-53 are in condition for allowance and such action is respectfully requested.

In the Office Action of May 25, 2000, claims 1-3, 4, 5, 7, 8, 11-13, 14, 15, 17, 18, 38, 40 and 48 were rejected under §103(a) as being unpatentable over Okaniwa Patent No. 5,667,880 in view of Dickey Patent No. 5,372,874. In this rejection, the Examiner indicated that the reasons for rejection based on Okaniwa were set forth in the Office Action of October 14, 1999. Accordingly, all of applicants' comments in response to the Office Action of October 14, 1999 distinguishing Okaniwa from the present invention are incorporated herein.

The current Office Action, acknowledges that Okaniwa only teaches applying an antireflective film to a glass substrate and that it does not disclose or suggest applying such a film to a plastic substrate. The current Office Action states, however, that:

7. cK²⁷⁸.
“To form multilayered anti-reflection coating by reactively sputtering dielectric oxide materials to a plastic substrate is very well known in the art as demonstrated by the teachings of Dickey et al., wherein various layer materials that are suitable for reactive sputtering process to form the anti-reflection coating on a plastic substrate is disclosed, (please see columns 2-6).”

Applicants dispute this statement for several reasons. First, there is no disclosure or suggestion in Dickey that the substrate could be plastic or some other temperature sensitive material. The only reference to a substrate in Dickey is that of a glass substrate. Thus, the Dickey reference is no more relevant than that of Okaniwa for this purpose.

Secondly, the invention of Dickey does not relate at all to use of materials such as tin oxide (SnO_2) and zinc oxide (ZnO) as layers for anti-reflection coatings, either on glass or on plastic.

Column 2
lines 1-5
Instead, the invention of Dickey is to replace at least one of the titanium dioxide (TiO_2) layers with niobium oxide. Thus, Dickey fails to teach use of tin oxide or zinc oxide or any of the other metal oxides identified in the present claims for use in anti-reflection coatings.

Thirdly, the only use of zinc oxide disclosed in Dickey is for use in the architectural glass coating industry, namely, to be used as a layer material for the formation of low emissivity (E) coatings. Such coatings are designed to reflect long wavelength infrared radiation while transmitting visible light.

Fourthly, Dickey actually teaches away from using materials such as tin oxide and zinc oxide for use as optical coatings. For example, although Dickey discloses that "Materials such as tin oxide (SnO_2) and zinc oxide (ZnO) may be deposited by DC reactive sputtering at a rate at least six times faster than that of titanium oxide" (column 2, lines 50-52), the "photopic reflection of a four layer antireflection coating using zinc oxide or tin oxide as the second layer would only be about 0.4 percent" (column 2, lines 54-57). This is well below what is strived for in Dickey. Accordingly, it would not have been an obvious modification to one having ordinary skill in the art to apply the teachings of Dickey to Okaniwa as has been suggested. Dickey simply fails to disclose the basis for such a modification.

Dickey further confirms the lack of understanding in the art as of the date of Dickey relative to the refractive index and the sputtering rate of material such as titanium dioxide and others which have a high refractive index, but are sputtered at low rates compared to materials having a lower refractive index, but are sputtered at high rates. See, for example, the discussion beginning in column 3, line 43 and ending in column 4, line 4. This further evidences the unobviousness of the combination/modification proposed.

Accordingly, for all of the above reasons, it is believed that all of the claims presently in the application are in condition for allowance and such action is respectfully requested.

In the event the Examiner believes a telephone call with the undersigned will serve to expedite the prosecution of this case, the Examiner is respectfully requested to telephone the undersigned at the number identified below.

Respectfully submitted,

Erik J. Bjornard, et al.

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